

Re: Application PCT/US97/05320

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Title: Sheet Feeding Apparatus

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DECLARATION

I, Roman M. Golicz, declare and affirm as follows:

1. I am one of the inventors for the above referenced patent application, and of a related application bearing Atty. Docket No. 9717.
2. I hold a B.Sc. degree in aeronautical engineering from ETACA (France). I have worked in design and development, in the field of document handling, sheet feeding and the like, for more than 30 years.
3. I am patentee for U.S. Pat. Serial No. 5,342,036 "High Capacity Sheet Feeders for Volume Printers".
4. Fig. 1, 14 and 15 of the '036 patent show a certain feed belt device 143, and I make this declaration to explain what that comprised. As mentioned in the patent, the feedbelt 143 is a part of printer 27, in particular a Xerox 9500/9700 type printer, for which the '036 invention was developed. The printer is described at Column 4, lines 51-58, and the feedbelt and its function is described at Col 13, line 35, continuing on to Col 14, line 19.
5. The Xerox printer had a complex feeder. Since the Xerox feeder was not part of the '036 claimed invention, but part of the prior art, the device 143 shown in the Figures was intended to be only suggestive of the Xerox feeder -- that is, a means for drawing sheets away from my feeder 97, and it was not an actual representation of the Xerox feedbelt. This should be evident since the '036 patent drawings and specification do not show any of the cooperating Xerox mechanism which I describe below.
6. The ordinary function of the Xerox feeder was to draw sheets from an elevator platform, into the printer. The '036 invention replaced the function of the elevator in providing sheets to the Xerox feeder.

Fig A, attached, shows the feedbelt assembly 320 of the Xerox printer, as it actually related to the sheet feeder shown in Fig. 14 and 15 of the '036 patent. The parts numbered in the 100's correspond with the part numbers of Fig. 14/15. The assembly 320 comprises a housing 338 on which are mounted the diverse parts. In particular, belt 143 runs around rollers 322, 326 and 324. The inside of belt 143 is like a timing belt and has ribs which mate with the ribbed surfaces of the rollers 322, 324. The outer surface of belt 143 is a longitudinally ribbed high friction material. Roller 324 is intermittently clutched and driven. Retard roller 328 has a high friction elastomer coating and is frictionally controlled by a slip clutch. Part 336 is a medium friction singulating shoe. Pinch rollers 330, 331 are independently driven to pull out from the vicinity of belt 143 any

sheets which reach the pinch rollers. Parts 332, 334 are sheet guides.

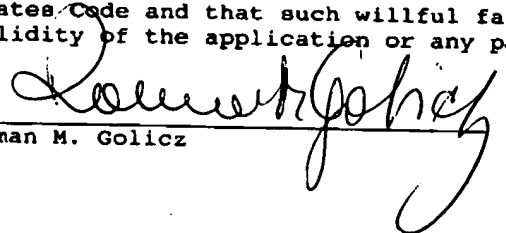
On command, the roller 324 drives belt 143, to feed a sheet over the singulating shoe 336 and to the pinch rollers. A sensor (not shown) detects the presence of the sheet and then stops the roller 324 and starts the pinch rollers. When passage of the trailing edge of the sheet through the pinch roller is detected, the roller 324 is restarted and the cycle repeats.

Housing 338 and thus the entire assembly just described, pivots about fulcrum point F. The housing moves through a range of about 5 degrees of motion, as illustrated by the phantom line P. In the design of the Xerox printer, the housing is counterbalanced through a system of springs and solenoids. When there is an elevator present, and sheets are withdrawn from the top of the stack, the wheel 322 moves downwardly, as the housing 338 counterbalancing system biases it to appropriately rotate about the fulcrum F. The few degrees of housing rotation are sensed, and the elevator is commanded to rise. In the invention of the '036 patent, the assembly 97 is placed on the elevator which stays stationary.

In reality, housing 338 cannot rotate as shown in Fig. 14/15. When there is no elevator/stack present or when an empty feeder 97 is mated with the Xerox machine, the outer end of belt 143 will be suspended in air "looking for a stack". Thus, Fig. 14 is wrongly shown. What really happens, as reference to the '036 patent at Column 13-16, in particular Column 15, line 63 to Column 16, line 23 shows, is that the feeder 97 is typically inserted empty and activated so that sheets accumulate until they rise to the level determined by sensor bar 157, which level puts the sheets in contact with belt 143, slightly raising it upward, thus rotating the housing 338 to the small degree necessary to activate the Xerox machine control system, as described above.

7. The '036 written description supports the above-described motion of the actual Xerox printer feed belt 143, and suggests nothing different. At the time of the '036 application I did not conceive that the mechanism of belt 143 would operate in any way that was different from the actual mechanism of the Xerox printer, and so I had no aim to communicate anything different. The belt 143 was an unessential part of a commercial device. I did not realize any resemblance existed between the device 143 and the prompter of our present application until my attorney, in preparing our present application, pointed out the resemblance and suggested that this declaration ought be made -- which I do not really feel is necessary. In my view the resemblance is superficial and coincidental and could not suggest the presently claimed prompter, especially since I and my co-inventor did not commence work on the prompter invention until several years after my '036 patent was applied for.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.


Roman M. Golicz

06/28/97
Date